

Assessing the Impact of Excessive Gestational Weight Gain among Women with Type 1 Diabetes and Overweight/Obesity in their Adolescent and Young Adult Offspring: A Pilot Study

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Supplementary Table 1. Maternal characteristics during pregnancy of women with type 1 diabetes in the DiP (1978-1995) and offspring characteristics at follow-up (2009) by offspring BMI classification, N=19

	Normal weight	Overweight / Obese		All
	7 (37)	12 (63)	<i>p</i>	19
Age at delivery (y)	28.6±3.7	25.3±4.0	0.09	26.5±4.1
Married	6 (86)	8 (67)	0.11	14 (74)
Black	0 (0)	4 (33)		4 (21)
Primiparous	4 (57)	6 (50)	0.76	10 (53)
Pre-pregnancy BMI (kg/m ²)	21.3±2.0	24.6±4.8	0.048	23.4±4.2
Pre-pregnancy BMI classification			0.14	
Normal (18.5 kg/m ² to <25 kg/m ²)	7 (100)	7 (58)		14 (74)
Overweight (≥25 kg/m ² to <30 kg/m ²)	0 (0)	4 (33)		4 (21)
Obese (≥30 kg/m ²)	0 (0)	1 (8)		1 (5)
Gestational Weight Gain (kilogram)	13.6±4.5	17.9±4.1	0.049	16.3±4.6
Gestational Weight Gain (kilogram) during 1st 20 weeks	4.1±2.2	7.6±4.2	0.11	4.1±2.2
IOM Guidelines			0.05	
Under/Within	5 (71)	3 (25)		8 (42)
Over	2 (29)	9 (75)		11 (58)
Preeclampsia	1 (14)	2 (17)	0.89	3 (16)
Previous C-section	0 (0)	4 (33)	0.09	4 (21)
Cesarean Section	4 (57)	8 (67)	0.68	12 (63)
Pre-term delivery (prior to 37 weeks' gestation)	1 (14)	3 (25)	0.58	4 (21)
Maternal Glucose Management				
Age at diagnosis of Insulin-Dependent Diabetes (years)	17.1±6.9	15.1±4.9	0.46	15.8±5.6
White classification			0.36	
B	4 (57)	2 (17)		6 (32)
C	1 (14)	5 (42)		6 (32)
D	1 (14)	3 (25)		4 (21)
R (Retinopathy)	0 (0)	1 (8)		1 (5)
RF (Retinopathy/Nephropathy)	1 (14)	1 (8)		2 (11)
Mean Glycohemoglobin A ₁ (HbA ₁)				
First trimester HbA ₁ (mmol/mol)	61.0	100.0	0.01	86.0
(%)	7.7±1.5	11.3±2.3		10.0±2.7
Second trimester HbA ₁ (mmol/mol)	56.0	72.0	0.04	65.0
(%)	7.3±1.2	8.7±1.4		8.1±1.4
Third trimester HbA ₁ (mmol/mol)	52.0	64.0	0.02	60.0
(%)	6.9±0.59	8.0±1.4		7.6±1.3
Mean preprandial glucose over gestation ^a	132.0±77.1	131.1±37.7	0.98	131.4±49.7
Mean postprandial glucose over gestation ^a	164.8±37.5	166.8±41.9	0.92	166.1±39.3
Mean insulin dose over gestation ^b	55.6±15.1	96.6±39.1	0.005	81.5±37.7
Mean insulin dose per kilogram weight over gestation ^c	0.86 ± 0.27	1.26 ± 0.45	0.046	1.1±0.4

Mean Arterial Pressure (MAP) 1st 20 weeks of gestation	87.5±10.9	83.6±9.0	0.45	85.1±9.6
Offspring Characteristics				
Age of offspring at follow-up (years)	18.9±3.7	21.1±2.9	0.18	20.3±3.3
Sex (male)	4 (57)	8 (67)	0.68	12 (63)
Birthweight (grams)	3891±976	3755±498	0.69	3805±688
Large for Gestational Age	5 (71)	7 (58)	0.57	12 (63)
Gestational Age (weeks)	38.6±1.4	38.2±1.8	0.69	38.3±1.6
BMI at follow-up (kg/m ²)	21.6±1.4	31.0±7.1	0.0007	27.5±7.3
BMI of offspring at follow-up waist circumference (cm) over NHLBI guidelines (yes)	0 (0)	6 (50)	0.02	6 (32)

^a Means were calculated from measurements taken in each trimester

^b Mean insulin dose over gestation was calculated from measurements of insulin dose taken at approximate weekly visits over full gestation, including at entry to delivery

^c Mean insulin dose per kilogram weight over gestation was calculated by dividing insulin dose taken at approximate weekly measurements over full gestation by participants' weight (in kg) at that visit.

Large for gestational age was defined as infants with a birthweight >90th percentile, according to gestational age, sex and race.

Waist circumference measurements for offspring >88 cm for females and >102 cm for males was defined as exceeding guidelines per NHLBI.

Data are expressed as mean ± standard deviation are shown for all continuous variables and n (%) are shown for categorical variables. *P < 0.05, **P < 0.01, ***P<0.001.

GWG=gestational weight gain; IOM=Institute of Medicine; BMI=body mass index; cm=centimeter;

NHLBI=National Heart, Lung and Blood Institute.

Missing values: marital status, n=1 (5); gestational weight gain in 1st 20 weeks, n=4 (21); mean HbA_{1c} in 1st trimester, n=5 (26%); mean HbA_{1c} in 2nd trimester, n=2 (11); mean preprandial glucose over gestation, n=2 (11); mean MAP, n=3 (16).